GENERAL

1. These plans were prepared to meet or exceed Texas Commission on Environmental Quality, Harris County and City of Houston Rules and Regulation as currently amended.
2. Water lines, wastewater collection systems, and drainage systems shall be constructed in accordance with the City of Houston, Department of Public Works and Engineering's "Standard Construction Specifications for Wastewater Collection Systems, Waterlines, Storm Drainage, and Street Paving", dated October, 2002, latest revision, and "Standard Construction Details for Wastewater Collection Systems, Water Lines, Storm Drainage and Street Paving, dated October, 2002, latest revision, unless otherwise noted and approved on these plans. The design is consistent with the minimum standards established in the "Infrastructure Design Manual", dated October, 2002, latest revision. Contractor shall use current copies of Design Manual, Standard Construction Specifications and Standard Construction Details issued by the City of Houston. Copies can be obtained at the City of Houston File Room, 611 Walker, Basement.
3. Contractor shall comply with occupational safety and health administration standards and any other federal, state and local regulations regarding trench safety systems for trench excavation.
4. Contractor shall notify the office of the City Engineer, Department of Public Works and Engineering at (713) 863-1450 for inspection at least 48 hours prior to commencing the construction.
5. This project is not tied into the official City of Houston Survey System in compliance with ordinance No. 69-1978 because a city survey marker has not been established within 2,000 feet of this property.
6. Engineer shall notify Harris County Engineering Department 24 hours in advance of commencing construction at 713-316-3561 and give written notice 48 hours in advance. Contractor shall notify the City of Houston, Department of Public Works and Engineering, construction division at 713-837-7000 48 hours before starting work on this project.
7. Authorization notice issued by Harris County Public infrastructure Engineering Department Permit Office required prior to construction of utilities or left turn lanes with Harris County Right-of-Way. Contact Harris County Permit Office 713-956-3000.
8. Contractor to obtain all construction permits required by the "Regulations of Harris County, Texas for Flood Plain Management" prior to starting construction.
9. The contractor shall be fully responsible for any and all damage to the existing public utility lines, including but not limited to water lines, wastewater collection systems and storm sewers, during construction. All damages shall be repaired in accordance with City of Houston, Department of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto with no cost to the public (no additional pay to contractor)
10. Contractor shall be responsible for locating and protecting all existing utilities and other facilities. Contractor shall verify in the field the exact locations prior to commencing construction. Contractor shall notify Texas One Call at (713) 226-4567 at least 48 hours before proceeding with any excavation.
11. Adequate drainage shall be maintained at all times during construction and any drainage ditch or structure disturbed during construction shall be restored to the satisfaction of the owning authority. All construction storm runoff shall comply with the final draft of Stormwater Management handbook for construction activities as prepared by Harris County/HCFCD, and the City of Houston all in compliance with the Texas Pollutant Discharge Elimination System (TPDES) requirements.
12. Condition of the road and/or right-of-way, upon completion of job, shall be as good or better than condition prior to starting work.
13. The contractor shall be fully responsible for any and all damage to the existing public or private utility lines, including but not limited to water lines, wastewater collection systems and storm sewers, during construction. All damages shall be repaired in accordance with City of Houston, Department of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, with no cost to the public.
14. Contractor shall take necessary precaution to protect root systems of shrubs plants and trees along the areas of excavation.
15. Unless specifically indicated otherwise on the plans, utilities within easements shall be located in accordance with standards outlined by the most current utility coordinating committee drawings.
16. If the construction does not begin within a year after the plans have been signed, new signatures must be obtained and letters of availability (if necessary) must be updated.
17. Contractor shall prepare a set of "As-Built" drawings showing any field changes made to the approved engineering plans and submit to the design consultant for submission to the city engineering.

GENERAL CONSTRUCTION NOTES FOR SWPPP AND SWQMP COMPLIANCE:
>1.0<5.0 ACRES
- Considered small construction activities
- Submit a Construction Site Notice (CSN) to the City and TCEQ.
- Post a Construction Site Notice at the construction site
- Required to develop a SWP3
- Not required to submit a NOI or NOT
- Any supporting concrete or asphalt plant is separately authorized to discharge under an individual TPDES Permit.

SWPPP CONSTRUCTION NOTES

1. Contractor shall implement inlet protection devices and Reinforced Filter Fabric barrier along road and side ditches at locations shown on the typical Storm Water Pollution Prevention (SWPP) plans to keep silt and/or excavated materials from entering into the storm water inlets and ditches eventually polluting the receiving storm.

2. During the excavation phase of the project, Contractor shall schedule the work in short segments so that excavated material can be quickly hauled away from the site and to prevent it from staying uncollected on the existing pavement. Any loose excavated material which falls on pavements or driveways shall be swept back into the excavated area.

3. Contractor shall clean up the existing street intersections and driveways daily, as necessary, to remove any excess mud, silt or rock tracked from the excavated area.

4. Contractor shall follow good housekeeping practices during the construction of the project, always cleaning up dirt and loose material as construction progresses.

5. Contractor to inspect and maintain the areas listed below at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- Disturbed areas of the construction site that have not been finally stabilized.
- Areas used for storage of materials that are exposed to precipitation.
- Structural control measures.
- Locations where vehicles enter or exit the site.

6. Contractor to be responsible to maintain existing ditches and/or culverts for unobstructed drainage at all times. Where sodding is disturbed by excavation on backfilling operations, such areas shall be replaced by seeding or sodding. Slopes 4:1 or steeper shall be replaced by block sodding.

SANITARY SEWERS

1. SANITARY SEWER SHALL BE BUILT ACCORDING TO CITY OF HOUSTON SPECIFICATIONS AND/OR ALL APPLICABLE BUILDING CODES.

2. MANHOLES SHALL BE BUILT IN ACCORDANCE WITH CITY OF HOUSTON DRAWING NO. 02601-02C FOR SEWERS 6" TO 24" OR DRAWING NO. 02601-03C FOR SEWERS 27" TO 60". ALL MANHOLES MUST BE PRECAST, WITH THE BASE SLAB REINFORCED WITH NO. 5 BARS AT 8" ON CENTER, EACH WAY. BRICK MANHOLES ARE NOT ALLOWED.

3. ALL SANITARY SEWER PIPE AND FITTINGS, UNLESS LABELED IN THE PLANS AS DUCTILE IRON (D.I.P.), SHALL BE P.V.C. AND SHALL CONFORM TO ASTM D-2241. P.V.C. PIPE MATERIAL SHALL CONFORM TO ASTM D-1784 WITH A RESIN CELL CLASSIFICATION OF 12454-B (PVC 1120). P.V.C. PIPES SHALL HAVE ELASTOMERIC JOINTS CONFORMING TO ASTM D-3139 AND GASKETS CONFORMING TO ASTMF-477. ALL 8" & 10" GRAVITY SANITARY SEWERS SHALL BE CONSTRUCTED USING SDR 26 PVC OR C-900 DR 18 PIPE UNLESS OTHERWISE SPECIFIED. P.V.C. FORCE MAINS SHALL MEET OR EXCEED THE REQUIREMENTS FOR SDR 21 (PR 200) PIPE. DUCTILE IRON PIPE SHALL BE IN CONFORMANCE WITH AWWA C-151 AND AWWA C-111, STANDARD CLASS 350, WITH BELL AND SPIGOT PUSH-ON JOINTS. D.I.P. SHALL HAVE AN INTERIOR COATING OF 40 MILS POLYETHYLENE AND EXTERIOR 8 MIL POLYETHYLENE WRAP.

4. ALL P.V.C. SANITARY SEWER PIPES SHALL HAVE BEDDING AND BACKFILL AS SHOWN ON CITY OF HOUSTON DRAWING NO. 02317-08. NO SEPARATE PAY.

5. SANITARY SEWERS LOCATED UNDER OR WITHIN ONE-FOOT OF PROPOSED OR FUTURE PAVING SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND (1-½ SACK/CUBIC YARD) TO WITHIN ONE FOOT OF PAVEMENT AS SHOWN ON CITY OF HOUSTON DRAWING NO. 02601-04 AND 02227-01C. NO SEPARATE PAY. (LAB VERIFICATION WILL BE REQUIRED PRIOR TO PLACEMENT OR PAVEMENT).

6. ALL SEWER LINES THAT REQUIRE DEWATERING FOR INSTALLATION SHALL BE BEDDED AND INSTALLED IN GENERAL CONFORMANCE WITH CITY OF HOUSTON DRAWING NO. 02601-04 AND 02227-01C.

7. ALL SEWER LINES 18 FEET OR GREATER IN DEPTH (AS MEASURED FROM THE MANHOLE RIM TO THE FLOWLINE OF THE PIPE) SHALL BE TELEVISED AND VIDEOTAPED BY THE CONTRACTOR IN THE PRESENCE OF THE ENGINEER. TAPES SHALL BE MADE IN THE VHS FORMAT, IN COLOR, AND TWO COMPLETE COPIES SHALL BE PROVIDED TO THE OWNER.

8. ALL SANITARY SEWER MANHOLES RIMS SHALL BE SET 3" TO 5" ABOVE SURROUNDING FINISHED GRADE, WITH SLOPED FILL ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM.

9. ALL 6" SANITARY SERVICE LEADS SHALL BE LAID WITH A MINIMUM GRADE OF 1.0%

10. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPE, EXCEPT SERVICE LEADS. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. THE TEST IS TO BE RUN USING A MANDREL HAVING AN OUTSIDE DIAMETER EQUAL TO 95% OF THE AVERAGE INSIDE DIAMETER OF THE PIPE. THE MANDREL SHALL HAVE A MINIMUM OF 9 RUNNERS, WITH THE CONTACT LENGTH OF EACH RUNNER EQUAL TO OR GREATER THAN THE PIE'S NOMINAL DIAMETER. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

11. ALL SANITARY SEWER MANHOLE RIMS SHALL BE SET 3" TO 5" ABOVE SURROUNDING FINISHED GRADE, WITH SLOPED FILL ADDED FOR STORM WATER DRAINAGE AWAY FROM THE MANHOLE RIM. WHERE SPECIFIED IN THE PLANS, SANITARY MANHOLES BELOW THE 100-YEAR FLOOD PLAIN (OR WHERE OTHERWISE REQUIRED) SHALL HAVE THE RIM SET FLUSH WITH THE FINISHED GRADE. THE RIM SHALL BE WATERPROOFED USING A NEOPRENE GASKET. ONLY STAINLESS STEEL SCREWS OR NUTS & BOLTS CAN BE USED TO HOLD DOWN THE COVER.

12. SANITARY SEWER LINES PARALLEL TO WATER LINES SHALL BE INSTALLED WITH AT LEAST A 9-FOOT CLEARANCE AND IN SEPARATE TRENCHES.

13. SANITARY LINES CROSSING BELOW WATER LINES MUST HAVE A FULL LENGTH JOINT (20' NOMINAL) CENTERED AT THE CROSSING WITH A MINIMUM SEPARATION DISTANCE OF SIX-INCHES.

14. SANITARY LINES CROSSING ABOVE WATER LINES MUXCEED A DEST HAVE A FULL LENGTH JOINT (20' NOMINAL) CENTERED AT THE CROSSING WITH A MINIMUM SEPARATION DISTANCE OF TWO-FEET.

15. SANITARY SEWER FORCE MAINS SHALL BE BROWN OR GREEN AND SHALL BE LABELED EVERY TWO FEET. "NON POTABLE WATER."

16. ALL SANITARY SERVICE SHALL BE LAMP TESTED MANHOLE TO MANHOLE.

17. ALL GRAVITY SANITARY SEWERS SHALL BE AIR TESTED PER SPECIFICATIONS.

All sanitary sewer bore and jacking work is to use either AWWA C-900, DR-18, PVC pipe or polyethylene lined & encased D.I.P., Thk Cl. 50-54, (thick-wall high pressure type of pipe). Use same for any san. swr. pipe (in the road R-O-W) having less than 6' of top cover from the adjacent natural ground @ the road R-O-W's nearest edge.

Any And All D.I.P. To Be Used Will Have Both External And Internal Protection. - External Polyethylene Tubing Or Double Wrap Will Be 8 Mils. Thick Per Layer And Tied To Pipe At 3' MAx. Internals (If Laid) Or Banded To Pipe At 1' Max. Internals (W/Screw-Tightened Steel Bands) If Jacked. - Internal Polyethylene Heat Fused Bonded Liner Will Be 40 Mils. Min. Thickness.

STORM SEWERS

GENERAL:
1. Contractor shall provide 12" minimum clearance at storm sewer and water line crossings.
2. The contractor shall be responsible for protecting, maintaining and restoring any backslope drainage system disturbed as a result of his work.
3. All ditches shall be regarded to proposed elevations to insure proper drainage. All outfalls shall be properly backfilled and compacted. All disturbed area shall be regarded, seeded and fertilized.
4. All driveways will be located to avoid existing curb inlet structures.
5. "STM. S. E." indicates "Storm Sewer Easement".

MANHOLES/INLETS:
6. All storm sewer manhole rims located outside the proposed paving shall be set to proposed finished grade elevation, in accordance with requirements of section 02086.
7. 24" to 72" storm sewers shall have type "C" M.H.S.
8. All inlets to be type "B-B" unless otherwise noted.

PIPES:
9. All storm sewer pipes and inlet leads shall be 24" and larger RCP (Class III, C-76) unless otherwise noted.
10. Concrete pipe shall be installed using rubber gasket joints only conforming to ASTM C 443.
11. All proposed pipe stub-outs from manholes or inlets are to be plugged with 8" brick walls unless otherwise noted.
12. Storm sewers and leads shall be reinforced concrete pipe, C-76, Class III, and shall be installed, bedded, and backfilled in accordance with City of Houston specifications and drawings 02317-02, 02317-03, 02317-04, 02317-05, 02317-06 and 02317-07 (Oct. 2002) as applicable.
13. C.M.P. (Corrugated Metal Pipe) shall be installed, bedded and backfilled according to Harris County Flood Control details.

BEDDING:
14. All sewers constructed in side lot easements shall be R.C.P. (C-76 Class III) and shall be bedded in accordance with City of Houston specifications and details included in this plan set as applicable - min 20' easement shall be provided.
15. All sewers under proposed or future pavement and to a point one (1) foot back of all proposed or future curbs shall be backfilled with 1 ½ sack cement/c.y. stabilized sand as-per details. The remaining depth of trench shall be backfilled with suitable earth material in 8 inch lifts, with test taken at 100 foot intervals on each lift, and mechanically compacted to a density of not less than 95% of the maximum dry density as determined by the standard proctor compaction test (ASTM Designation D-698/AASHTO T99). Moisture content of backfill shall be in accordance with the requirements of the cement-stabilized sand specification, latest edition. Alternate to cement stabilized sand backfill for pipes 54-inch and larger, from 1-foot above the top of pipe to the bottom of the subgrade. Contractor may backfill with suitable material, provided the backfill material is place in 8-inch lifts and mechanically compacted to 95% standard proctor density. Test shall be taken at 100-foot intervals on each lift. Bedding and backfill to 1-foot above the top of the pipe shall be cement stabilized sand.

UTILITY BACKFIL
1. Backfill for utilities shall be in accordance with City of Houston specification 02317 and per City of Houston details included in these plans or any other applicable City of Houston details.
2. Backfill compaction to be at a minimum of 90 percent (outside of pavement) and 95 percent (under or within 1 foot of pavement) of the maximum dry density and at a moisture content recommended from geotechnical investigation.

PAVING
1. Guidelines set forth in the Texas manual on uniform traffic control devices shall be observed.
2. Clean exposed steel and tie to existing pavement; if not exposed, saw cut and break off 24" to expose steel.
3. All curb return RADII are 25', unless otherwise noted, and have a 1% min. grade.
4. Paving shall be in accordance with Harris County "Regulations of Harris County, Texas for the approval and acceptance of infrastructure", pavement detail sheet S/D-1 and the latest revisions and/or amendments of same.
5. All stop signs shall be T.M.U.T.C.D. standard No. MR-1-1 (24"X24"). Stop sign shall be placed as shown at radius point curb approximately two feet behind curb.
6. All proposed inlets to be constructed to avoid conflicts with any future driveways.

STORM WATER QUALITY PRE-CONSTRUCTION INSPECTION REQUIREMENTS
1. The property owner or the contractor shall contact the Harris County Storm Water Quality Permitting Section at 713-956-3000 for a pre-construction inspection prior to commencing any clearing or construction activities on the site.

STANDARD HCFCD NOTES FOR CONSTRUCTION DRAWINGS

1. Notify the Harris County Flood Control District, Property Management Department in writing at least 48 hours prior to construction. Submit the HCFCD 48 hour pre-construction notification form and a copy of the approved construction drawings to HCFCD, 9900 Northwest Freeway, Houston, Texas 77092, Attn: Property Management Dept.

2. Engineer shall submit certification letter and record drawings to the Harris County Flood Control District, Property Management Department, requesting inspection of items constructed in Harris County Flood Control District right-of-way. Prior to requesting inspection, the drainage right-of-way and/or easements shall be staked and flagged.

3. Protect, maintain, and restore existing backslope drainage systems.

4. Backslope swale and interceptor structure elevations and locations shown on plans are approximate. Final elevations and locations shall be field verified by the engineer prior to installation.

5. Establish turf grass on all disturbed areas within the channel or detention right-of-way, except the channel bottom and where structural erosion measures are used. Minimum acceptance criteria are 75% coverage of live Bermuda grass and no erosion or rills deeper than 4".

6. Backfill in accordance with the Harris County Flood District Standard Specification, Section 02315-Excavating and Backfilling, or equivalent.

7. Excavate channel flowline to design elevation as shown on plans and downstream, as necessary, to ensure no water in storm sewer during "dry" conditions.

8. Maintain flow in channel during construction and restore channel to original condition.

9. Remove all excavated material from the Harris County Flood Control District or drainage right-of-way. No fill is to be placed within a designated flood plain area without first obtaining a fill permit from the appropriate jurisdictional authority.

10. Obtain and comply with all applicable City, County, State, and Federal permits and approvals, with assistance from Engineer, if necessary.

WATER LINES

GENERAL:
1. Contractor shall provide for a minimum horizontal clearance of 9' (nine feet) between water lines and sanitary sewer manholes and lines.
2. "W.L.E." indicates "Water Line Easement"
3. This project shall be constructed by means of open cut, except where noted on the drawings. The contractor will determine the locations of bore pits in the field, subject to the City Engineer's approval.

PIPE:
4. 4" thru 12" water lines shall be P.V.C. class 150, DR-18, AWWA C-900.
5. All water lines shall have a 12" bottom and 12 side bank - sand envelope and shall be backfilled to a minimum compacted depth of 12" over the top of the pipe to provide a compacted encasement in accordance with City of Houston water department specifications and details included in this plan set.
6. All water pipe and related products must conform to ANSI/NSF standard 61.
7. Pipe shall not be laid in water or placed where it can be flooded with water or sewage during its storage or installation in compliance with TAC 290.44(f) (1).
8. All plastic pipe for use in public water systems must also bear the national sanitation foundation seal of approval (NSF-pw) as required in section 290.44(a)(2) of the rules.
9. 4" through 12" fittings shall be cement mortar lined compact ductile iron pressure fittings per ANSI A21.53 CONFORMING TO THE REQUIREMENTS OF SECTION 02528- Polyethylene Wrap, or push on fittings per ANSI A21.10 pressure rated at 250 PSIG.

BEDDING:
10. Water lines under proposed or future paving and to within 1 foot back of all proposed or future curbs shall be encased in bank sand to 12" above pipe and backfilled with 1 ½ sack cement / c.y. stabilized sand to within one (1) foot of subgrade.
11. All fill and compaction to 95% standard proctor density shall be performed prior to construction of water lines.

TESTING:
12. All water lines to be disinfected in conformance with AWWA C-651. A minimum of one bacteriological sample shall be collected for each 1,000 feet of completed waterline to check efficiency of disinfection procedures and shall be repeated if contamination persists.
13. Hydrostatic Testing: All water pipe shall be tested for leakage in accordance with AWWA C-600, section 4 standards for a duration of not less then two hours. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section thereof, to maintain pressure within 5 PSI of the specified test pressure after the pipe has been filled with water and the air has been expelled. The test pressure shall be either a minimum of 125 PSIG or 1.5 times the working pressure whichever is larger. The maximum leakage shall be calculated using the formula as follows:

$L = (S)(D)(P^{1/2})/133{,}200$

WHERE L = ALLOWABLE LEAKAGE IN GAL./HR.
S = LENGTH OF PIPE TESTED IN FEET
D = INSIDE DIAMETER OF PIPE IN INCHES
P = PRESSURE IN POUNDS PER SQUARE INCH (GAUGE)

OR COH STANDARD SPECIFICATION 02515-2 3.03 b (10/01/2002) CONTRACTOR SHALL FOLLOW THE MORE STRINGENT OF THE TWO SPECIFICATIONS.

1. The hydrostatic leakage rate for PVC pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in AWWA C-605 as required in section 290.44(a)(5) of the rules. [$L = NDP^{1/2}/7{,}400$]

This approval is for construction using auger/bore and jack method only. For any reason, if open cut method is required, appropriate pavement restoration typical sheet shall be submitted for review at least 48 hours in advance before starting construction. These restorations typical shall be drawn on Mylar, sealed, signed and dated by a Professional Engineer in the State of Texas.

Fill exceeding 1 (one) foot in height above natural grade requires a grading permit in compliance with Appendix "E" 2000 International Building Code, unless exempted by Sect. E103.2. Grading in the private properties shall be approved and permitted by the Code Enforcement Branch of the Department of Public Works and Engineering.

1. Existing pavement, curbs sidewalks, and driveways damaged or removed during construction shall be replaced to City of Houston standards.

TRAFFIC NOTES

1. Contractor shall provide and install traffic control devices in conformance with Part VI of the Texas Manual on Uniform Traffic Control Devices (Texas MUTCD, most recent edition with revisions) during construction.
2a. No lanes shall be closed during the hours of 7:00 AM to 9:00 PM and 4:00 PM to 6:00 PM Monday through Friday.
2b. No lanes shall be closed during the hours of 7:00 PM to 7:00 AM.
3. Contractor shall maintain one lane of traffic in each direction during working hours.
4. Contractor shall cover open excavations with steel plates anchored properly during non-working hours, and open lanes for normal traffic flow.
5. Off-duty uniformed police officer/flagger(s) is/are required to direct traffic when lanes are blocked.
6. In the event when no "traffic Control Plans" exist as part of contract drawings, contractor shall prepare plans and submit to Plan Review Section for approval ten working days prior to implementation.

*These plans shall be drawn to scale on reproducible mylars and sealed by a licensed engineer in the State of Texas. Plus will become part of the contractor drawings.

7. Approval copies of "Traffic Control Plans" and lane/sidewalk closure permits* shall be available for inspection at job site at all times.

*Contractor must secure "Lane/sidewalk Closure Permits" from City's Traffic Management and Maintenance Branch before closing a lane/sidewalk. The request must be made at least ten business days prior to the data for which the closure is sought. Note that working hours may be restricted or the request my be denied. Call 713-837-7280 for an application.

SBC NOTE

The locations of SBC facilities are shown in an approximate way only. The contractor shall determine the exact location before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by this failure to exactly locate and preserve these underground utilities.

The contractor shall call 1-800-344-8377 a minimum of 48 hours prior to construction to have underground lines field located.

When excavating within eighteen inches (18") of the indicated location of SBC facilities, all excavations must be accomplished using non-mechanized excavation procedures. When boring the contractor shall expose the SBC facilities.

When SBC facilities are exposed, the contractor will provide support to prevent damage to the conduit ducts or cables. When excavating near telephone poles the contractor shall brace the pole for support.

CAUTION: UNDERGROUND GAS FACILITIES

Locations of CenterPoint Energy main lines (to include CenterPoint Energy, Intrastate Pipeline, LLC. where applicable) are shown in an approximate location only. Service lines are usually not shown. Our signature on these plans only indicates that out facilities are shown in approximate location. It does not imply that a conflict analysis has been made. The contractor shall contact the Utility Coordinating Committee at (713) 223-4567 or 1-800-669-8344 a minimum of 48 hours prior to construction to have main and service lines field located.

When CenterPoint Energy pipe line markings are not visible, call (713) 967-8037 (7:00 a.m. to 4:30 p.m.) for status of line location request before excavation begins.

When excavating within eighteen inches (18") of the indicated location of CenterPoint Energy facilities, all excavation must be accomplished using non-mechanized excavation procedures.

When CenterPoint Energy facilities are exposed, sufficient support must be provided to the facilities to prevent excessive stress on the piping.

The contractor is fully responsible for any damages caused by his failure to exactly locate and preserve these underground facilities.

WARNING: OVERHEAD ELECTRICAL FACILITIES

Overhead lines may exist on the property. We have not attempted to mark those lines since they are clearly visible, but you should locate them prior to beginning any construction. Texas law, Section 752, Health & Safety code, forbids all activities in which persons or things May come within six (6) feet of live overhead high voltage lines. Parties responsible for the work, including contractors, are legally responsible for the safety of construction workers under this law. This law carries both criminal and civil liability. To arrange for lines to be turned off or removed call CenterPoint Energy at 713-207-2222.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
STREET BRIDGE AND RIGHT-OF-WAY NOTES
(INSIDE HOUSTON CITY LIMITS)

1. Department of Public Works and Engineering's "Standard Construction Specifications", dated October 2002, and "Standard Construction Details for Wastewater Collection Systems, Water Lines, Storm Drainage and Street Paving", dated October 2002 (and later) unless otherwise noted and approved on these plans. The design is consistent with the minimum standards established in the "Infrastructure Design Manual" dated October 2002.
2. Fill areas on plans shall be filled in layers not exceeding 8" in depth and each compacted to not less than 95% standard proctor density prior to installation of water line and fill area shall be seeded and fertilized within working days.
3. Utility contractor shall provide temporary silt barrier fence on all non-curb inlets which will remain in place after underground contract is complete.
4. Contractor shall provide silt barrier fence on all stage 1 curb inlets.
5. Existing pavements, curbs, sidewalks, and driveways damaged or removed during construction shall be replaced to City of Houston Standards.
6. Condition of the road and/or right-of-way, upon completion of job, shall be as good as or better than the condition prior to starting work.
7. Adequate drainage shall be maintained at all times during construction and any drainage ditch or structure disturbed during construction shall be restored to the satisfaction of the owning authority.
8. Expose 15" of reinforcing steel at proposed sawed joint. If no reinforcing steel exists, use horizontal dowels. Horizontal dowels shall be #6 bars, 24" long, 24" C-C. Drilled and embedded 8" into the center of the existing slab with "PO ROC" or equal.
9. Contractor to take necessary precautions to protect root systems of shrubs, plants and trees along the area of excavation.
10. The contractor shall comply with OSHA regulations and state of Texas law concerning excavation. Trenching and shoring as specified in City of Houston Ordinance #87-1457.
11. Wheel chair ramps shall be installed in accordance with the City of Houston standards at all intersections where existing curb or sidewalk is damaged or removed during construction.
12. Wastewater collection systems, water lines, storm drainage system shall be constructed in accordance with the City of Houston, Department of Public Works and Engineering's "Infrastructure Design manual" dated october 2002 with all subsequent amendments added there to unless otherwise noted and approved on these plans. The design must agree with the minimum standards established in the "Infrastructure Design Manual" dated october 2002. Note that plan signatures expire after 1 year and the latest editions of design rules, specifications & manuals shall govern as of the date of resigning.
13. The contractor shall be fully responsible for any and all damage to existing public or private utility lines, including but not limited to paving, water lines, wastewater collection systems and storm sewers during construction. All damage shall be repaired in accordance with City of Houston Department of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto with no cost to the public.
14. Prior to street construction, the contractor shall contact the Department of Public Works and Engineering at 713-535-7579 or 713-535-7582 and comply with all requirements for the issuance of the necessary permits/work orders for street construction.

STATE OF TEXAS
DINESH N. ENGINEER
51551
REGISTERED
PROFESSIONAL ENGINEER
03-02-10

ALL CONSTRUCTION SHALL BE CONSTRUCTED ACCORDING TO ALL CRITERIA OF THE CITY OF HOUSTON

CONTACT: JOHN ENGLISH
5301 HOLLISTER SUITE 190
HOUSTON, TEXAS 77040
(TEL) 713-895-8080
(FAX) 713-895-7686

NOTE:
THESE PLANS, PREPARED BY REKHA ENGINEERING INC. DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REKHA ENGINEERING INC. REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE "HOUSE BILLS 662 AND 665" ENACTED BY THE TEXAS LEGISLATURE IN THE 70th LEGISLATION - REGULAR SESSION.

FIRE STATION No. 20 (PHASE 2)

6902 NAVIGATION BOULEVARD
HOUSTON, TEXAS

REVISIONS

REV.	DESCRIPTION	DATE
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STANDARD NOTES

SCALE: N.T.S.

DATE: 12/28/09

REKHA ENGINEERING INC.
CIVIL ENGINEERS AND LAND SURVEYORS
5301 Hollister Road, Suite 190
Houston, Texas 77040
713-895-8080
713-895-8081
Fax: 713-895-7686

email: jake1@rdq.net

TBPE No. F-3712

DRAWN BY: PRV | CHECKED BY: JHE
APPROVED BY: DNE | JOB No. 0809-2920
CLIENT: CITY OF HOU. GENERAL SERVICES

SHEET No.
C10

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